

What is claimed is:

5 1. A method for routing a signaling message in a SS7/C7 telecommunication network including a first and second licensed operator networks, the first licensed operator network including a Border Node, the second licensed operator network including an adjacent Border Node to the Border Node in the first licensed operator network, wherein the first and second licensed operator networks are using a same Point Code configuration numbering plan for defining their nodes and wherein the Border Node in the first telecommunication network and the adjacent Border Node in the second licensed operator network are interconnected by at least a Link Set, also the SS7/C7 telecommunication network is characterized in that the Border Node in the first licensed operator network is supporting Message Transfer Part Point Code Mapping for both licensed operator networks. Said method comprising steps of:

10 receiving in the Message Transfer Part (MTP) of the Border Node in the first licensed operator network a signaling message, the signaling message including an Originating Point Code (OPC) and a Destination Point Code (DPC), wherein the OPC and DPC values are according with the numbering plan of the licensed operator network that originates the signaling message;

15 mapping based in the direction of the signaling message in the MTP of the Border Node in the first licensed operator network, the OPC and DPC from the first numbering plan to an second network numbering plan; and

20 delivering the signaling message from the Border Node in the first licensed operator network to a destination node according to the mapped DPC of the second numbering plan.

2. The method of Claim 1, wherein the Border Node is a Signaling Transfer Point or a Signaling End Point.

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3. The method of Claim 1, wherein the signaling message is an outgoing signaling message or an incoming signaling message.

4. The method of Claim 1, wherein the step of receiving in the Message Transfer Part (MTP) of the Border Node in the first licensed operator network a signaling message, the signaling message is an outgoing signaling message and signaling message is originated in the first licensed operator network, wherein the outgoing signaling message including an actual OPC in the first licensed operator network and an alias DPC in the second network as defined within the first licensed operator network's own numbering plan.

5. The method of Claim 1, wherein the step of mapping based in the direction of the signaling message in the MTP of the Border Node in the first licensed operator network, the signaling message is an outgoing signaling message and the actual OPC and alias DPC are mapped from the first network's own numbering plan to an alias OPC and an actual DPC in the second network's numbering plan.

6. The method of Claim 5, wherein the step of mapping based in the direction of the signaling message in the MTP of the Border Node in the first licensed operator network, wherein the signaling is an outgoing message, further includes the steps of:

checking in the MTP of the Border Node if the Link Set associated toward the destination node supports MTP Point Code Mapping, if so

extracting the actual OPC and alias DPC from the outgoing signaling message;

selecting an MTP Point Code Mapping Table associated to the Link Set;

performing a mapping in the MTP of the Border Node of said actual OPC to the alias

OPC;

performing a mapping in the MTP of the Border Node, of said alias DPC to the actual DPC of the destination node ; and

replacing the actual OPC by alias OPC and the alias DPC to the actual DPC, wherein the alias OPC and the actual DPC are known in the second licensed operator network.

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7. The method of Claim 6, wherein the selected Link Set has associated therewith a Mapping Point Code Table.

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8. The method of Claim 1, wherein the step of receiving in the Message Transfer Part (MTP) of the Border Node in the first licensed operator network a signaling message, the signaling message is an incoming signaling message and signaling message is originated in the second licensed operator network, wherein the incoming signaling message including an actual OPC in the second licensed operator network and an alias DPC from the perspective of the second licensed operator network as defined within the second licensed operator network's own numbering plan.

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9. The method of Claim 1, wherein the step of mapping based in the direction of the signaling message in the MTP of the Border Node in the first licensed operator network, the signaling message is an incoming signaling message and the actual OPC and alias DPC are mapped from the second network's own numbering plan to an alias OPC and an actual DPC in the first licensed operator network's numbering plan.

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10. The method of Claim 9, wherein the step of mapping based in the direction of the signaling message in the MTP of the Border Node in the first licensed operator network, wherein the signaling is an incoming message, further includes the steps of:

checking in the MTP of the Border Node if the Link Set associated toward the destination node supports MTP Point Code Mapping, if so

extracting the actual OPC and alias DPC from the incoming signaling message;

selecting an MTP Point Code Mapping Table associated to the Link Set;

performing a mapping in the MTP of the Border Node of said actual OPC to the alias OPC;

performing a mapping in the MTP of the Border Node, of said alias DPC to the actual DPC of the destination node ; and

replacing the actual OPC by alias OPC and the alias DPC to the actual DPC, wherein the alias OPC and the actual DPC are known in the first licensed operator network.

11. The method of Claim 10, wherein the selected Link Set has associated therewith a Mapping Point Code Table.

12. A database for MTP Point Code Mapping, comprising:

an identity field for an associated Link Set;

an identity field associated with Point Codes in an own numbering plan; and

an identity field associated with Point Codes in an external numbering plan.

13. The database of Claim 12, wherein the identity field for an associated Link Set contains the Link Set Identifier of a Link Set that connects two Border Nodes in different licensed operator network, which is associated to an MTP Point Code Mapping Table.

14. The database of Claim 12, wherein the identity field associated with Point Codes in an own numbering contains the actual Point Code values according to the own numbering plan.

15. The database of Claim 12, wherein the identity field associated with Point Codes in an external numbering contains the alias Point Code values according to the external numbering plan.

16. A network node operable to apply Message Transfer Part functions to a signaling message containing Point Codes, the network node comprising:

a first means for processing the signaling message to apply the MTP level 1 function;

a second means for processing the signaling message to apply the MTP level 2 function;

a third means for processing the signaling message to apply the MTP level 3 function, wherein the MTP level 3 function includes a MTP Point Code Mapping means for translating the Point Codes in the signaling message into different Point Codes in a different numbering plan than the numbering plan of the Point Codes originally contained in the signaling message; and

a fourth means for processing the signaling message to apply the MTP level 4 function.

17. The network node of Claim 16, wherein the network node is a Telephone Switch, a Mobile Switching Center, a Home Location Register, an Authentication Center, a Signaling Control Point, a Signaling Switching Point, a Billing Center, a Message Center, a Signaling Data Point, a Visitor Location Register, a Mobile Positioning Center, or an Operation & Maintenance Center.

18. The network node of Claim 16, wherein the MTP Point Code Mapping means maps the Point Codes originally contained in an outgoing signaling message from own numbering plan to external numbering plan.

5 19. The network node of Claim 16, wherein the MTP Point Code Mapping means maps the Point Codes originally contained in an incoming signaling message from external numbering plan to own numbering plan.

20. A SS7/C7 telecommunication network including a first and second licensed
10 operator networks, the first licensed operator network including a Border Node, the second licensed operator network including an adjacent Border Node to the Border Node of the first licensed operator network, the first and second licensed operator networks assigning Point Codes according to the same numbering plan, and the Border Node of the first licensed operator network including a MTP
15 Point Code Mapping Table for the Link Set connecting the Border Node in the first licensed operator network and the adjacent Border Node in the second licensed operator network, the MTP Point Code Mapping Table associating an alias Point Code assigned in the first licensed operator network to a node in the second licensed operator network with the actual Point Code for the same node in the second licensed operator network.